

Amendments to Specification

APPLICATION FOR UNITED STATES PATENT

This application is a continuation of U.S. application 09/082,535, filed May 21, 1998, now abandoned, which is a continuation-in-part of U.S. application 8/446,103, filed May 19, 1995, now abandoned.

**Field of the Invention:**

This invention relates to a 28 kDa protein which has use as a diagnostic agent for identifying antibodies to Brucella species and as vaccines to raise antibodies against Brucella.

**Background of the Invention:**

Brucellosis is a disease caused by microorganisms of the genus Brucella. B. abortus infects cattle, causing abortion. B. melitensis infects sheep and goats. B. ovis infects birds and B. canis infects dogs. Infection usually results from contact with secretions and/or excretions from infected animals. At one time, infection was usually the result of ingestion of milk or products of milk from infected animals. The disease is rarely transmitted from person to person. Persons more frequently exposed to the disease include meat packers, veterinarians, farmers and livestock producers. Raw milk, which was once a common source of infection in North America, no longer presents a serious problem, since commercially available milk is pasteurized. However, milk and milk products still present a source of infection in countries where pasteurization is not practiced routinely.

In humans, the onset of disease may be accompanied by chills, fever, headache and muscular pain. At other times, the onset is insidious. The patient may suffer mild malaise, muscular, head and neck pain. The disease may result in